

## RESEARCH SHOWS HAPPINESS LEADS TO SUCCESS

A team of researchers has come up with a startling finding: it is better to be happy than sad. And that, the team concludes, may put you on the road to success.

That finding may seem a tad obvious, but the fact is that a lot of research has pointed in another direction, contending that happiness is the result of a lot of things: success at work, a good marriage, a fit body, a fat bank account.

But according to psychologists at three universities, that's backward. They conclude that people aren't happy because they are successful, but are successful because they are happy.

The researchers combed through 225 studies involving 275,000 people and found that most researchers put the proverbial cart before the horse. Most investigators "assume that success makes people happy". However, they conclude that happy people are easier to work with, more highly motivated and more willing to tackle a difficult project, thus they are more likely to be successful.

"What is the hallmark of happiness?" the researchers asked. "Our focus in this article is on happy individuals—that is, those who experience frequent positive emotions such as joy, interest and pride, and infre-



quent (though not absent) negative emotions such as sadness, anxiety and anger."

Most people who are miserable seem eager to share their misery.

"Happy moods appear to lead people to seek out others and to engage with the environment at large, to be more venture-some, more open and more sensitive to other individuals."

But there may be a downside. Sometimes, especially when the subject is "chronically happy", co-workers may find all that cheerfulness a bit annoying.

(Source: ABC News, December 21, 2005, <http://abcnews.go.com/Technology/story?id=1424940>)

## ACUPUNCTURE'S EFFECTS NOT ALL IN THE MIND

Clinical studies suggest that acupuncture can help treat a variety of conditions, but no one is sure exactly how it achieves its effects. Acupuncture can stimulate the release of painkilling endorphins, but so can pretending to insert an acupuncture needle.

George Lewith and colleagues at the University of Southampton, UK, split 14 people who suffer from osteoarthritis into three groups. All had a needle applied to an acupuncture point on the hand.

The first group was treated with blunt needles that did not penetrate the skin. The participants were told this was not real acupuncture, and PET scans showed that only brain areas involved in sensing

touch lit up.

The second group was treated with sham needles that retract into their shaft. This group believed they were receiving real acupuncture, and the scans revealed activity in brain areas that release endorphins.

In the third group, proper needles were inserted. Not only did the endorphin areas of the brain light up, but so did another area called the ipsilateral insula which is known to be important in the perception of pain.

(Source: New Scientist, 7 May 2005)

## EVIDENCE THAT ALZHEIMER'S DISEASE IS A TYPE OF DIABETES

Researchers at Rhode Island Hospital and Brown Medical School have discovered that insulin and its receptors drop significantly in the brain during the early stages of Alzheimer's disease, and that levels decline progressively as the disease becomes more severe—further evidence that Alzheimer's is a new type of diabetes.

They also found that acetylcholine deficiency, a hallmark of the disease, is linked directly to the loss of insulin and insulin-like growth-factor function in the brain.

The study, published in the November 2005 issue of the *Journal of Alzheimer's Disease*, is the first to look at insulin levels early in the course of the disease.

"Insulin disappears early and dramatically in Alzheimer's disease. And many of the unexplained features of Alzheimer's, such as cell death and tangles in the brain, appear to be linked to abnormalities in insulin signaling. This demonstrates that



the disease is most likely a neuroendocrine disorder, or another type of diabetes," said senior author Suzanne de la Monte, a neuropathologist at Rhode Island Hospital and a professor of pathology at Brown Medical School in Providence, Rhode Island.

The researchers also offered an explanation for the acetylcholine deficiency that is linked to dementia and has long been recognised as an early abnormality in Alzheimer's. They found that insulin and IGF-I stimulate the expression of choline acetyltransferase (ChAT), the enzyme responsible for making acetylcholine. This discovery shows a direct link between insulin and IGF-I deficiency and dementia.

"We're able to show that insulin impairment happens early in the disease. We're able to show it's linked to major neurotransmitters responsible for cognition. This work ties several concepts together, and demonstrates that Alzheimer's disease is quite possibly a type three diabetes," said Professor de la Monte.

(Source: Lifespan, November 30, 2005, [http://www.lifespan.org/news/2005/11/RIH\\_Alzheimer\\_11\\_30\\_05.htm](http://www.lifespan.org/news/2005/11/RIH_Alzheimer_11_30_05.htm))

## BRAINWAVE ACCESS TO BANK ACCOUNTS AND HOMES

Canadian researchers hope soon to be able to use brainwaves to unlock doors and get access to bank accounts, making it possible to do away with key cards, PIN numbers and a litany of other security tools that allow people to retrieve bank money, access computer data or enter restricted buildings.

"A user would simply think their password," said Julie Thorpe, a researcher at Carleton University in Ottawa, who hopes to develop the first biometric security device to read the mind to authenticate the user. Her idea, yet to be proved viable for commercial application, assumes that brainwave signals, like fingerprints, vary slightly from person to person, even when they think alike.

"Everyone's brainwave signal is a bit different, even when they think about the same thing. They're unique, just like fingerprints," she told AFP. A user would only have to think up a different password and save it on a computer, Thorpe said, describing what would become the world's first changeable biometric security tool.

Whereas slight differences in brainwave patterns have created difficulties for researchers trying to build universal tools that could translate thoughts into computer

commands, these peculiarities make brainwaves ideal for security applications.

"You could use a sound or music or childhood memory as your pass," Thorpe said. "You could even flash someone an image to help them remember their password," she said.

Thorpe must still prove that people can reproduce clear, concise signals over and over. "Often, unconscious thoughts, maybe a song in the back of your mind, may blur a signal. There's a lot going on in people's heads," she said.

(Source: Agence France-Presse via Physorg.com, December 14, 2005, <http://www.physorg.com/news9034.html>)

## EVERY CAR JOURNEY TO BE MONITORED IN THE UK

Britain is to become the first country in the world to record the movements of all vehicles on the roads. A new national surveillance system will hold the records for at least two years.

With a network of cameras that can automatically read every passing number plate, the plan is to build a huge database of vehicle movements so that the police and security services can analyse any journey a driver has made over several years.

The network will incorporate thousands of existing CCTV cameras which are being converted to read number plates automatically to provide 24/7 coverage of all motorways and main roads as well as towns, cities, ports and petrol-station forecourts.

By March 2006, a central database

installed alongside the Police National Computer in Hendon, north London, will store the details of 35 million number-plate "reads" per day. These readings will include time, date and precise location, with camera sites monitored by global positioning satellites.

Already there are plans to extend the database by increasing the storage period to five years and by linking thousands of additional cameras so that details of up to 100 million number plates can be fed each day into the central databank.

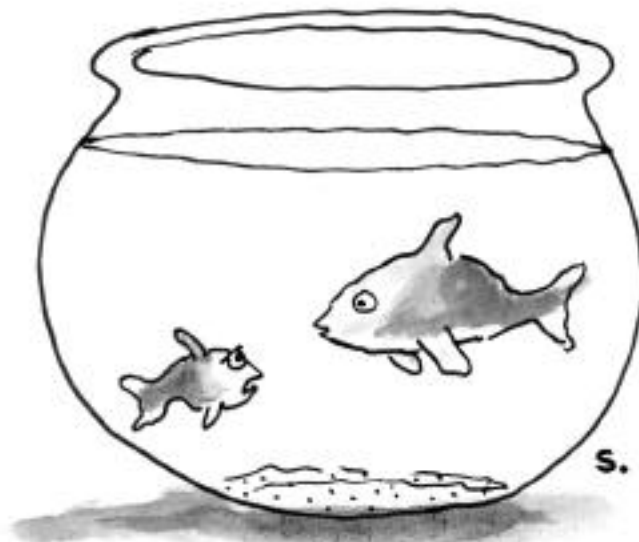
(Source: The Independent, UK, 22 December 2005)

## DEVELOPING NATIONS UNITE AGAINST USA AND EU

One hundred and ten countries are now united in the G110, a grouping of the world's middle and lower income developing nations. These countries ask for one thing, and one thing only: that the USA and the EU practise what they preach.

The USA and European Union claim to represent free and fair trading practices, and they speak about the importance of the market-based economy in the capitalist model. What they practise is something entirely different: namely, cloistered and interventionist trading practices which protect their own markets against those countries trying to compete with them. It is the antithesis of the capitalist-monetarist model, which proves clearly that the model has been flawed from the outset.

After complaining for decades about the controlled economy and State intervention



"Mum, I'm worried. Do you think one day the world's oceans won't rise?"

in economic cycles, which was the case of the Soviet economic model, Washington and Brussels do exactly the same thing.

The hero of the day is the Brazilian foreign minister, Celso Amorim, the leader of the G20 group of middle-income developing countries which has managed to forge a common stance with the lower-income developing countries, forming a strong bloc of 110 nations—the G110.

(Source: Pravda, December 17, 2005)

## HEAVY METALS IN HYDROPONIC MARIJUANA LINKED TO "PSYCHOTIC EPISODES"

A physician from the Sunshine Coast, Queensland, Australia, has stated that the heavy metals in hydroponically grown marijuana are affecting developing brains and increasing the psychotic episodes experienced by users.

Addiction medicine physician Dr David Taylor said there is an ongoing misconception shared by the majority of medical colleagues concerning the active agent, THC, in hydroponic marijuana that "caused" psychotic mental states. He said THC is unlikely to be the culprit.

"Our attention should be turned to evidence about the adverse influences of heavy metals on the development of children's brains," he said. "Hydroponic marijuana is laced with heavy metals and they are, in my view, the culprits disturbing brain function.

"Hydroponic marijuana is grown in fertiliser and fertilising solutions that are heavily laced with trace elements and particularly some of the heavy metals. It is bad, not because of the concentration but because it is actually introducing toxic levels of heavy metals into developing brains—and then comes the psychosis that comes with disturbance of brain function."

Dr Taylor said that if it took a certain amount of THC to get stoned and if marijuana users smoked a more powerful THC joint, they would stop when they got to their stoned state.

"If it's got lower doses, they will smoke more. Saying high doses of THC have started bringing out these psychotic changes is a mistaken belief because people will smoke to their need."

Dr Taylor said that because of legal issues surrounding marijuana, it is impossible to conceive a research project to clarify the matter. He estimates that hydroponic marijuana accounts for 80% of the market and said that, in Australia, seized marijuana is not routinely calculated for concentration nor analysed for potentially dangerous agents.

A former senior medical officer with the Alcohol and Tobacco and Other Drugs Unit at Nambour Hospital, Dr Taylor now practises from his clinic, Kalinn Therapy, at Buderim.

(Source: Sunshine Coast Daily, Queensland, November 21, 2005)

## USING PUBLIC DOMAIN TO PREVENT PATENTING OF PLANTS

In a quiet government office in the Indian capital New Delhi, some 100 doctors are hunched over computers, poring over ancient medical texts and keying in information. These doctors are practitioners of *ayurveda*, *unani* and *siddha*—ancient Indian medical systems that date back thousands of years.

The ambitious \$2-million project, christened Traditional Knowledge Digital Library, will roll out an encyclopaedia of the country's traditional medicines in five languages—English, French, German, Japanese and Spanish—in an effort to stop corporations from claiming them as their own and patenting them.

The electronic encyclopaedia will contain information on the traditional medicines, including exhaustive references, photographs of the plants and scans from the original texts.

Dr Vinod Kumar Gupta, who is leading the traditional wealth encyclopaedia project and heads India's National Institute of Science Communication and Information Resources (NISCAIR), reckons that, of the nearly 5,000 patents given out by the US Patent Office on various medicinal plants by the year 2000, some 80% involved plants of Indian origin.

Practitioners of traditional medicines say their importance cannot be denied. According to the World Health Organization, 70% of the people living in India use traditional medicine for primary health care. Also, some 42% of the people living in the US and 70% of the people living in Canada have used traditional medicines at least once for treatment.

(Source: BBC News, December 7, 2005, <http://news.bbc.co.uk>)

## IBM CALLS FOR GLOBAL IDENTITY SYSTEM

The growing need for fast, accurate verification of personal identities has prompted a call from an industry observer for a global agency to set international standards.

The realm of identity and access management (IAM) is heating up as nations like the UK and the USA increase their use of biometrics and other identifying technologies in ID cards, border controls and other areas.

Beyond different governments "trying to create a mosaic for what they want as good identity management", wider international



cooperation is needed to establish a common language and standards, said Cal Slem, vice-president and global leader for security and privacy services at IBM Global Services.

The common language for exchanging user access information is also known as federated IAM.

"Governments have a huge part to play in this, because they have ultimate responsibility for their citizens, and depending on the country they may have ultimate responsibility for the businesses and e-commerce as well," Slem said.

What's missing right now, he noted, is a trusted third party to authenticate trustworthiness. "So we've got inconsistent and incomplete implementation [in individual countries], and also no standard approach to the future nor a target to shoot at."

Slem believes that now is the right time to establish a global body that will consider the interests of all countries and build up a foundation, which the individual countries can expand upon to fulfil their unique requirements.

"There are organisations that work together on this issue and issues like that across borders all the time, and it can be as grandiose as to say the UN has a process in place to share information like that and create working groups to try to create standards or expectations and across multiple jurisdictions," said Slem. "I just don't know what the name would be."

(Source: ZDNet Asia, November 10, 2005)

## HYPERBARIC OXYGEN MOBILISES STEM CELLS

A study, to be published in the April 2006 edition of the *American Journal of Physiology – Heart and Circulatory Physiology*, reveals that hyperbaric oxygen treatments increase by eightfold the number of stem cells circulating in a patient's body. Stem cells, also called progenitor cells, are crucial to injury repair.

Stem cells exist in the bone marrow of human beings and animals and are capable of changing their nature to become part of many different organs and tissues. In response to injury, these cells move from the bone marrow to the injured sites, where they differentiate into cells that assist in the healing process.

The movement, or mobilisation, of stem cells can be triggered by a variety of stimuli including pharmaceutical agents as well as hyperbaric oxygen treatments.

(Source: via [http://www.eurekalert.org/pub\\_releases/2005-12/uops-psf122805.php](http://www.eurekalert.org/pub_releases/2005-12/uops-psf122805.php))

## BRITISH MP CALLS FOR URGENT BAN ON ASPARTAME

A member of the parliamentary select committee on food and the environment yesterday called for emergency action to ban the artificial sweetener aspartame, used in 6,000 food, drink and medicinal products.

The Liberal Democrat MP Roger Williams said in an adjournment debate in the Commons that there was "compelling and reliable evidence for this carcinogenic substance to be banned from the UK food and drinks market altogether". In licensing aspartame for use, regulators around the world had failed in their main task of protecting the public, he told MPs.

Mr Williams highlighted new concerns about the additive's safety, raised by a recent Italian study that linked aspartame to cancer in rats. He said the history of aspartame's licensing put "regulators and politicians to shame", with the likes of Donald Rumsfeld, the US defence secretary and former head of Searle, the company that discovered the sweetener, "calling in his markers" to get it approved.

Responding for the government, the public health minister, Caroline Flint, said a thorough independent review of safety data had been conducted as recently as 2001 and the Food Standards Agency advice remained the same: aspartame is safe for use in food. She said the government took food safety very seriously.

"I am advised that aspartame does not cause cancer," she said, adding that artificial sweeteners also help to control obesity.

The European Food Safety Authority would be reviewing the Italian study as soon as it had full data on it, but an initial review by the UK's expert committee on toxicity had not been convinced by its authors' interpretation of their data.

Aspartame is now consumed on average every day by one in 15 people worldwide, most of whom are children, according to the MP. It is used to sweeten no fewer than 6,000 products, from crisps, confectionery, chewing gums, diet and sports drinks to vitamin pills and medicines, including those for children. Yet the science that supported its approval was "biased, inconclusive and incompetent".

Mr Williams said he was using the immunity he was afforded under parliamentary privilege to initiate a debate about aspartame's safety, which had been largely repressed since the early 1980s with the help of the sweetener industry's lawyers.

Independent research published in November by the European Ramazzini Foundation showed that moderate regular consumption of aspartame led to a repeated incidence of malignant tumours in rats and "should have set alarm bells ringing in health departments around the world", said Mr Williams. "The World Health Organization recognises such findings in rats as being highly predictive of a carcinogenic risk for humans. The contrast between the quality of the science in the Ramazzini study and the industry studies could not be more clear and more damaging to the industry."

Mr Williams, the MP for Brecon and Radnorshire and a Cambridge science graduate, said he had been looking into the safety of aspartame for more than a year. At first he had been unconvinced by the "internet conspiracy theories", but he said that what he had found "truly horrified" him. Sound science and proper regulatory and political independence had been notable by their absence in the approval of aspartame, he said. In addition to Mr Rumsfeld being instrumental in securing aspartame's approval with the support of the then newly elected US president Ronald Reagan, there had been numerous examples of decision-makers who were worried about aspartame's safety being discredited or removed from their positions. Industry sympathisers had been appointed to replace them and, in turn, were recompensed with lucrative jobs working for the sweetener industry.

The European Food Safety Authority said last night [December 14] that it planned to review the safety of aspartame as "a matter of high priority" in the light of the Ramazzini Foundation study. The foundation's director, Dr Morando Soffritti, said he expected to send the authority a 1,000-page dossier by the end of the month.

The industry's Aspartame Information Service said Mr Williams's material brought no new information to the public. "The minister's response was accurate and on point", according to a statement.

(Source: By Felicity Lawrence, The Guardian, UK, December 15, 2005)